



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 97837**

**TO: Sheridan Snedden**  
**Location: CM1/10A12/9B01**  
**Art Unit: 1653**  
**Thursday, July 03, 2003**

**Case Serial Number: 848107**

**From: Alex Waclawiw**  
**Location: Biotech-Chem Library**  
**CM1-6A02**  
**Phone: 308-4491**

**Alexandra.waclawiw@uspto.gov**

### **Search Notes**

Examiner Snedden,

I was not able to "not" out the amino acids listed in your search request. The system that we use does not allow us to "not" out certain amino acids. When I searched sequence ID 1, I edited the sequence so that at positions 274, 305, 306, and 309 any amino acid could be substituted. In the print out you will see a "x" in the query sequence in the positions listed. Please contact me if you have any questions or would like for me to try a different strategy.

Alex Waclawiw



# STIC Search Report

## Biotech-Chem Library

STIC Database Tracking Number: ~~9745~~ 98062

TO: Sheridan Snedden  
Location: CM1/10A12/9B01  
Art Unit: 1653  
Thursday, July 03, 2003

Case Serial Number: 848107

From: Alex Waclawiw  
Location: Biotech-Chem Library  
CM1-6A02  
Phone: 308-4491

Alexandra.waclawiw@uspto.gov

### Search Notes

STIC-Biot ch/ChemLib

Fr m:  
Sent:  
T :  
Subject:

Snedden, Sheridan  
Tuesday, July 01, 2003 1:04 PM  
STIC-Biotech/ChemLib  
Seq Search 09848107

Sheridan SNEDDEN ID# 79298 Date: 7/1 /2003  
AU 1653  
308-4843  
Serial #: 09/848,107  
Room Location: 10A12  
Mail Box: 9B01

Earliest Priority Filing Date:

- 1) SEQ ID NO: 1 where position 274 is not Ala
- 2) SEQ ID NO: 1 where position 305 is not Leu
- 3) SEQ ID NO: 1 where position 306 is not Met, and 309 is not Asp

Please **DO NOT SEARCH** the **PENDING PATENTS** Database.

Thanks,  
Examiner Snedden  
#79298  
A.U. 1653/9B01  
Office Location: 10A12  
Phone #: 305-4843

1-426 ah

STN

Q 19  
p 10

19-PAF  
55-03  
20-05  
20-30  
23-13

Point of Contact:  
Alexandra Wacławiw  
Technical Info. Specialist

Searcher: CM1 6A02 Tel: 308-4491  
Phone: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date Picked Up: 7-3-03  
Searcher Prep/Review: 7-3-03  
Clerical: \_\_\_\_\_  
Online time: \_\_\_\_\_

TYPE OF SEARCH:

NA Sequences: \_\_\_\_\_  
AA Sequences: \_\_\_\_\_  
Structures: \_\_\_\_\_  
Bibliographic: ☒ \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST (where applic.)

STN: ☒ \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_

=> d his

(FILE 'HOME' ENTERED AT 10:24:11 ON 03 JUL 2003)

FILE 'REGISTRY' ENTERED AT 10:24:15 ON 03 JUL 2003

L1 120 S PVV.TDHSVVP.\*VSGW..LL.R/SQSP  
SAVE L1 TEMP SNEDDEN/A  
L2 118 S L1 AND SQL>200  
L3 114 S L2 AND SQL>400  
L4 0 S L3 AND SQL=426  
L5 10 S L3 AND (274 OR 305 OR 306 OR 309)  
L6 10 S L1 AND (274 OR 305 OR 306 OR 309)  
SAVE L6 TEMP SNEDDEN2/A

FILE 'HCAPLUS' ENTERED AT 10:28:24 ON 03 JUL 2003

L7 87 S L3  
L8 3 S L6  
L9 46 S L7 AND VII  
L10 45 S FACTOR VII AND L9  
L11 43 S L10 NOT L8  
L12 1 S L10 AND ((274 OR 305 OR 306 OR 309 ) OR (274 OR 305 OR 306 O

```
=> fil re
'RE' IS AN AMBIGUOUS FILE OR CLUSTER NAME
REACTION      - Reactions Cluster
RESEARCH      - Research Cluster
REGISTRY      - The CAS Registry File of substances
```

ENTER FILE OR CLUSTER NAME (IGNORE): reg

FILE 'REGISTRY' ENTERED AT 10:34:31 ON 03 JUL 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 1 JUL 2003 HIGHEST RN 540721-20-8

DICTIONARY FILE UPDATES: 1 JUL 2003 HIGHEST RN 540721-20-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his 11-16

(FILE 'HOME' ENTERED AT 10:24:11 ON 03 JUL 2003)

FILE 'REGISTRY' ENTERED AT 10:24:15 ON 03 JUL 2003

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L1      120 S PVV.TDHVVP.*VSGW..LL.R/SQSP
        SAVE L1 TEMP SNEDDEN/A
L2      118 S L1 AND SQL>200
L3      114 S L2 AND SQL>400
L4       0 S L3 AND SQL=426
L5      10 S L3 AND (274 OR 305 OR 306 OR 309)
L6      10 S L1 AND (274 OR 305 OR 306 OR 309)
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→ seq 10 1

=> d sqide3 16 1-10

L6 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 506456-74-2 REGISTRY

CN [158-aspartic acid, 296-valine, 298-glutamine, 305-valine, 337-alanine]-Blood-coagulation factor VIIa (human) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 5: PN: W003027147 SEQID: 1 claimed protein

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Aaa-6	-
uncommon	Aaa-7	-

uncommon	Aaa-14	-	-
uncommon	Aaa-16	-	-
uncommon	Aaa-19	-	-
uncommon	Aaa-20	-	-
uncommon	Aaa-25	-	-
uncommon	Aaa-26	-	-
uncommon	Aaa-29	-	-
uncommon	Aaa-35	-	-

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
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Not Given	WO2003027147
	claimed
	SEQID 1

SEQ3

1 Ala-Asn-Ala-Phe-Leu-Aaa-Aaa-Leu-Arg-Pro-  
11 Gly-Ser-Leu-Aaa-Arg-Aaa-Cys-Lys-Aaa-Aaa-  
21 Gln-Cys-Ser-Phe-Aaa-Aaa-Ala-Arg-Aaa-Ile-  
31 Phe-Lys-Asp-Ala-Aaa-Arg-Thr-Lys-Leu-Phe-  
41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Asp-Cys-Pro-  
161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
=== === === === === === === ===  
261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
=== === === === === === === ===  
271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
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281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
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291 Gly-Ala-Thr-Ala-Leu-Val-Leu-Glu-Val-Leu-  
301 Asn-Val-Pro-Arg-Val-Met-Thr-Gln-Asp-Cys-  
311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
331 Gly-Tyr-Ser-Asp-Gly-Ser-Ala-Asp-Ser-Cys-  
341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-

371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 506456-73-1 REGISTRY

CN [158-aspartic acid, 296-valine, 298-glutamine, 305-valine]-Blood-coagulation factor VIIa (human) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4: PN: WO03027147 SEQID: 1 claimed protein

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Aaa-6	-
uncommon	Aaa-7	-
uncommon	Aaa-14	-
uncommon	Aaa-16	-
uncommon	Aaa-19	-
uncommon	Aaa-20	-
uncommon	Aaa-25	-
uncommon	Aaa-26	-
uncommon	Aaa-29	-
uncommon	Aaa-35	-

PATENT ANNOTATIONS (PNTE):

Sequence | Patent

Source | Reference

=====+=====

Not Given | WO2003027147

| claimed

| SEQID 1

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Aaa-Aaa-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Aaa-Arg-Aaa-Cys-Lys-Aaa-Aaa-  
 21 Gln-Cys-Ser-Phe-Aaa-Aaa-Ala-Arg-Aaa-Ile-  
 31 Phe-Lys-Asp-Ala-Aaa-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-

131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Asp-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
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 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
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 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
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 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
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 291 Gly-Ala-Thr-Ala-Leu-Val-Leu-Glu-Val-Leu-  
 301 Asn-Val-Pro-Arg-Val-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 506456-72-0 REGISTRY

CN [305-valine, 337-alanine]-Blood-coagulation factor VIIa (human)  
(9CI) (CA INDEX NAME)

OTHER NAMES:

CN 3: PN: W003027147 SEQID: 1 claimed protein

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Aaa-6	-	-	
uncommon	Aaa-7	-	-	
uncommon	Aaa-14	-	-	
uncommon	Aaa-16	-	-	
uncommon	Aaa-19	-	-	
uncommon	Aaa-20	-	-	



uncommon	Aaa-25	-	-
uncommon	Aaa-26	-	-
uncommon	Aaa-29	-	-
uncommon	Aaa-35	-	-

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
=====	=====
Not Given	WO2003027147
	claimed
	SEQID 1

SEQ3

1 Ala-Asn-Ala-Phe-Leu-Aaa-Aaa-Leu-Arg-Pro-  
11 Gly-Ser-Leu-Aaa-Arg-Aaa-Cys-Lys-Aaa-Aaa-  
21 Gln-Cys-Ser-Phe-Aaa-Aaa-Ala-Arg-Aaa-Ile-  
31 Phe-Lys-Asp-Ala-Aaa-Arg-Thr-Lys-Leu-Phe-  
41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
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261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
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281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
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291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
301 Asn-Val-Pro-Arg-Val-Met-Thr-Gln-Asp-Cys-  
311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
331 Gly-Tyr-Ser-Asp-Gly-Ser-Ala-Asp-Ser-Cys-  
341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 466702-17-0 REGISTRY

CN Blood-coagulation factor VII [305-valine] (human) (9CI) (CA  
INDEX NAME)

OTHER NAMES:

CN 27: PN: WO02077218 SEQID: 1 claimed sequence

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Aaa-6	-	-	
uncommon	Aaa-7	-	-	
uncommon	Aaa-14	-	-	
uncommon	Aaa-16	-	-	
uncommon	Aaa-19	-	-	
uncommon	Aaa-20	-	-	
uncommon	Aaa-25	-	-	
uncommon	Aaa-26	-	-	
uncommon	Aaa-29	-	-	
uncommon	Aaa-35	-	-	

PATENT ANNOTATIONS (PNTE):

Sequence | Patent

Source | Reference

=====+

Not Given | WO2002077218

| claimed

| SEQID 1

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Aaa-Aaa-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Aaa-Arg-Aaa-Cys-Lys-Aaa-Aaa-  
 21 Gln-Cys-Ser-Phe-Aaa-Aaa-Ala-Arg-Aaa-Ile-  
 31 Phe-Lys-Asp-Ala-Aaa-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-

171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
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 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
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 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
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 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
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 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Leu-Val-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 466702-15-8 REGISTRY

 CN Blood-coagulation factor VII [305-valine,306-aspartic  
 acid,309-serine] (human) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 25: PN: WO02077218 SEQID: 1 claimed sequence

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Aaa-6	-
uncommon	Aaa-7	-
uncommon	Aaa-14	-
uncommon	Aaa-16	-
uncommon	Aaa-19	-
uncommon	Aaa-20	-
uncommon	Aaa-25	-
uncommon	Aaa-26	-
uncommon	Aaa-29	-
uncommon	Aaa-35	-

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
=====+	=====
Not Given	WO2002077218
	claimed
	SEQID 1

SEQ3      1 Ala-Asn-Ala-Phe-Leu-Aaa-Aaa-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Aaa-Arg-Aaa-Cys-Lys-Aaa-Aaa-  
 21 Gln-Cys-Ser-Phe-Aaa-Aaa-Ala-Arg-Aaa-Ile-  
 31 Phe-Lys-Asp-Ala-Aaa-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Val-Asp-Thr-Gln-Ser-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified  
 CI MAN  
 SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 372210-15-6 REGISTRY

CN Blood-coagulation factor VII [305-valine,306-aspartic  
acid,309-serine] (human clone .lambda.HVII2463) (9CI) (CA INDEX  
NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Gla-6	-	-	
uncommon	Gla-7	-	-	
uncommon	Gla-14	-	-	
uncommon	Gla-16	-	-	
uncommon	Gla-19	-	-	
uncommon	Gla-20	-	-	
uncommon	Gla-25	-	-	
uncommon	Gla-26	-	-	
uncommon	Gla-29	-	-	
uncommon	Gla-35	-	-	

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
=== ===  
261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
=== ===  
271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
=== ===  
281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
=== ===

291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Val-Asp-Thr-Gln-Ser-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 372210-14-5 REGISTRY

CN Blood-coagulation factor VII [305-threonine] (human clone  
 .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Gla-6	-	-	
uncommon	Gla-7	-	-	
uncommon	Gla-14	-	-	
uncommon	Gla-16	-	-	
uncommon	Gla-19	-	-	
uncommon	Gla-20	-	-	
uncommon	Gla-25	-	-	
uncommon	Gla-26	-	-	
uncommon	Gla-29	-	-	
uncommon	Gla-35	-	-	

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-

171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
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 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Thr-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 372210-13-4 REGISTRY

CN Blood-coagulation factor VII [305-isoleucine] (human clone  
 .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Gla-6	-	-	
uncommon	Gla-7	-	-	
uncommon	Gla-14	-	-	
uncommon	Gla-16	-	-	
uncommon	Gla-19	-	-	
uncommon	Gla-20	-	-	
uncommon	Gla-25	-	-	
uncommon	Gla-26	-	-	
uncommon	Gla-29	-	-	
uncommon	Gla-35	-	-	

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-

11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
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 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Ile-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 372210-12-3 REGISTRY

CN Blood-coagulation factor VII [305-valine] (human clone  
 .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE



type	location	description
uncommon	Gla-6	-
uncommon	Gla-7	-
uncommon	Gla-14	-
uncommon	Gla-16	-
uncommon	Gla-19	-
uncommon	Gla-20	-
uncommon	Gla-25	-
uncommon	Gla-26	-
uncommon	Gla-29	-
uncommon	Gla-35	-

SEQ3

1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
=== ===  
261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
=== ===  
271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
=== ===  
281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
=== ===  
291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
301 Asn-Val-Pro-Arg-Val-Met-Thr-Gln-Asp-Cys-  
311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L6 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 372134-92-4 REGISTRY

CN Blood-coagulation factor VII [306-aspartic acid,309-serine] (human  
 clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Gla-6	-	-	
uncommon	Gla-7	-	-	
uncommon	Gla-14	-	-	
uncommon	Gla-16	-	-	
uncommon	Gla-19	-	-	
uncommon	Gla-20	-	-	
uncommon	Gla-25	-	-	
uncommon	Gla-26	-	-	
uncommon	Gla-29	-	-	
uncommon	Gla-35	-	-	

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === === === === === === === === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===

271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Leu-Asp-Thr-Gln-Ser-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 10:34:53 ON 03 JUL 2003

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FILE COVERS 1907 - 3 Jul 2003 VOL 139 ISS 1

FILE LAST UPDATED: 2 Jul 2003 (20030702/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d his 17-

(FILE 'REGISTRY' ENTERED AT 10:24:15 ON 03 JUL 2003)

SAVE L6 TEMP SNEDDEN2/A

FILE 'HCAPLUS' ENTERED AT 10:28:24 ON 03 JUL 2003

L7 87 S L3

L8 3 S L6

L9 46 S L7 AND VII

→ 10 sequences from registry

L10 45 S FACTOR VII AND L9  
 L11 43 S L10 NOT L8  
 L12 1 S L10 AND ((274 OR 305 OR 306 OR 309 ) OR (274 OR 305 OR 306 O

FILE 'REGISTRY' ENTERED AT 10:34:31 ON 03 JUL 2003.

FILE 'HCAPLUS' ENTERED AT 10:34:53 ON 03 JUL 2003

=> d .ca hitstr l8 1-3;d .ca hitstr l12 1

L8 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:261871 HCAPLUS

DOCUMENT NUMBER: 138:282448

TITLE: Sequences of human coagulation factor VIIa and  
 therapeutic use

INVENTOR(S): Persson, Egon; Olsen, Ole Hvilsted

PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003027147	A2	20030403	WO 2002-DK635	20020926
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003100075	A1	20030529	US 2002-255032	20020924
PRIORITY APPLN. INFO.: DK 2001-1413 A 20010927 US 2001-327512P P 20011005				

AB The present invention provides sequences of a novel human coagulation factor VIIa. The invention also relates to vectors and host cells comprising and expressing the coagulation factor VIIa, pharmaceutical compns., uses and methods of treatment.

IC ICM C07K014-745

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 1, 6, 13

IT 506456-71-9DP, Blood-coagulation factor VIIa (human), subfragments are claimed 506456-72-0DP, subfragments are claimed 506456-73-1DP, subfragments are claimed 506456-74-2DP, subfragments are claimed

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence; sequences of human coagulation factor VIIa and therapeutic use)

IT 506456-72-0DP, subfragments are claimed 506456-73-1DP, subfragments are claimed 506456-74-2DP, subfragments are claimed

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(amino acid sequence; sequences of human coagulation factor VIIa and therapeutic use)

RN 506456-72-0 HCAPLUS

CN [305-valine, 337-alanine]-Blood-coagulation factor VIIa (human) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 506456-73-1 HCAPLUS

CN [158-aspartic acid, 296-valine, 298-glutamine, 305-valine]-Blood-coagulation factor VIIa (human) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 506456-74-2 HCAPLUS

CN [158-aspartic acid, 296-valine, 298-glutamine, 305-valine, 337-alanine]-Blood-coagulation factor VIIa (human) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L8 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:754572 HCAPLUS

DOCUMENT NUMBER: 137:273206

TITLE: Human coagulation factor VII mutants with enhanced activity and PEG conjugates of factor VII mutants with enhanced serum half-lives for use as hemostatics

INVENTOR(S): Persson, Egon

PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.

SOURCE: PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002077218	A1	20021003	WO 2002-DK189	20020321
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003044908	A1	20030306	US 2002-109498	20020322
PRIORITY APPLN. INFO.:			DK 2001-477	A 20010322
			US 2001-281261P	P 20010403

AB The present invention relates to novel human coagulation factor VII (FVII) mutants, FVII mutants conjugated with PEG, nucleic acids encoding such proteins, vectors and host cells comprising and expressing the nucleic acid, pharmaceutical compns., uses and methods of treatment. Some of the FVII mutants display enhanced activity; others, which contain a cysteine in place of a nonessential residue, are conjugated to PEG to provide derivs. with enhanced serum half-life. These FVII mutants and derivs. may be used for treating hemophilia. FVII inactivated by reaction with halomethylketones may be used as antithrombotics.

IC ICM C12N009-64

CC 1-8 (Pharmacology)  
Section cross-reference(s): 7  
IT 466701-87-1D, Blood-coagulation factor VII (human), substitution mutants, conjugates with PEG 466702-10-3D, substitution mutants, conjugates with PEG 466702-11-4D, substitution mutants, conjugates with PEG 466702-12-5D, substitution mutants, conjugates with PEG 466702-13-6D, substitution mutants, conjugates with PEG 466702-14-7 466702-15-8 466702-16-9 466702-17-0 466702-18-1  
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(amino acid sequence; human coagulation factor VII mutants with enhanced activity and PEG conjugates of factor VII mutants with enhanced serum half-lives for use as hemostatics)  
IT 466702-15-8 466702-17-0  
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(amino acid sequence; human coagulation factor VII mutants with enhanced activity and PEG conjugates of factor VII mutants with enhanced serum half-lives for use as hemostatics)  
RN 466702-15-8 HCAPLUS  
CN Blood-coagulation factor VII [305-valine,306-aspartic acid,309-serine] (human) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 466702-17-0 HCAPLUS  
CN Blood-coagulation factor VII [305-valine] (human) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2001:816884 HCAPLUS  
DOCUMENT NUMBER: 135:354704  
TITLE: Human coagulation factor VII variants with improved activity  
INVENTOR(S): Persson, Egon; Olsen, Ole Hvilsted  
PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.  
SOURCE: PCT Int. Appl., 47 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

*Priority to Smt Forest Dr.*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083725	A1	20011108	WO 2001-DK294	20010501
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BX, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1282693	A1	20030212	EP 2001-927644	20010501
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			

## PRIORITY APPLN. INFO.:

DK 2000-734 A 20000503

DK 2000-1360 A 20000913

WO 2001-DK294 W 20010501

AB The present invention relates to novel human coagulation factor VIIa variants having coagulant activity as well as nucleic acid constructs encoding such variants, vectors and host cells comprising and expressing the nucleic acid, pharmaceutical compns., uses and methods of treatment. The variants are modified in position 305 or position 374 in native human coagulation factor VII. Factor VII variants may also replace the amino acid residues in positions 274, 300-304, and 306-310 or elsewhere in the protease domain and/or N-terminal Gla domain, thereby obtaining a protein having an increased activity as well as an increased affinity for membrane phospholipids compared to native factor VII. Thus, the L305V/M306D/D309S variant of human factor VIIa exhibits a 3.0-6.3-fold increase activity in comparison to wild-type VIIa. The variants are useful in anticoagulant therapy and achieving satisfactory hemostasis.

IC ICM C12N009-64

ICS C07K014-745; A61K038-36

CC 7-5 (Enzymes)

Section cross-reference(s): 63

IT 102786-52-7DP, Blood-coagulation factor VII (human clone .lambda.HVII2463 protein moiety), variants 372134-92-4P 372134-93-5P

372210-12-3P 372210-13-4P 372210-14-5P

372210-15-6P

RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence; human coagulation factor VII variants with improved activity)

IT 372134-92-4P 372210-12-3P 372210-13-4P

372210-14-5P 372210-15-6P

RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence; human coagulation factor VII variants with improved activity)

RN 372134-92-4 HCAPLUS

CN Blood-coagulation factor VII [306-aspartic acid,309-serine] (human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-12-3 HCAPLUS

CN Blood-coagulation factor VII [305-valine] (human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-13-4 HCAPLUS

CN Blood-coagulation factor VII [305-isoleucine] (human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-14-5 HCAPLUS

CN Blood-coagulation factor VII [305-threonine] (human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-15-6 HCAPLUS

CN Blood-coagulation factor VII [305-valine,306-aspartic acid,309-serine]

(human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:816884 HCAPLUS

DOCUMENT NUMBER: 135:354704

TITLE: Human coagulation factor VII  
variants with improved activity

INVENTOR(S): Persson, Egon; Olsen, Ole Hvilsted

PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.

SOURCE: PCT Int. Appl., 47 pp:

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083725	A1	20011108	WO 2001-DK294	20010501
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1282693	A1	20030212	EP 2001-927644	20010501
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:

DK 2000-734 A 20000503  
 DK 2000-1360 A 20000913  
 WO 2001-DK294 W 20010501

AB The present invention relates to novel human coagulation factor VIIa variants having coagulant activity as well as nucleic acid constructs encoding such variants, vectors and host cells comprising and expressing the nucleic acid, pharmaceutical compns., uses and methods of treatment. The variants are modified in position 305 or position 374 in native human coagulation factor VII. Factor VII variants may also replace the amino acid residues in positions 274, 300-304, and 306-310 or elsewhere in the protease domain and/or N-terminal Gla domain, thereby obtaining a protein having an increased activity as well as an increased affinity for membrane phospholipids compared to native factor VII. Thus, the L305V/M306D/D309S variant of human factor VIIa exhibits a 3.0-6.3-fold increase activity in comparison to wild-type VIIa. The variants are useful in anticoagulant therapy and achieving satisfactory hemostasis.

IC ICM C12N009-64

ICS C07K014-745; A61K038-36

CC 7-5 (Enzymes)

Section cross-reference(s): 63

ST blood coagulation factor VII variant



IT Animal cell line  
(BHK, recombinant host; human coagulation factor VII variants with improved activity)

IT Animal cell line  
(CHO, recombinant host; human coagulation factor VII variants with improved activity)

IT Anticoagulants  
Blood coagulation  
Molecular cloning  
Protein engineering  
(human coagulation factor VII variants with improved activity)

IT Animal cell  
(mammalian, recombinant host; human coagulation factor VII variants with improved activity)

IT Protein sequences  
(of human coagulation factor VII variants with improved activity)

IT Mutagenesis  
(site-directed; human coagulation factor VII variants with improved activity)

IT Animal  
Plant (Embryophyta)  
(transgenic; human coagulation factor VII variants with improved activity)

IT 102786-52-7DP, Blood-coagulation factor VII  
(human clone .lambda.HVII2463 protein moiety), variants  
372134-92-4P 372134-93-5P 372210-12-3P  
372210-13-4P 372210-14-5P 372210-15-6P  
RL: BAC (Biological activity or effector, except adverse); BPN  
(Biosynthetic preparation); BSU (Biological study, unclassified); PRP  
(Properties); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(amino acid sequence; human coagulation factor VII variants with improved activity)

IT 372214-06-7, 1: PN: WO0183725 SEQID: 18 unclaimed DNA 372214-07-8, 2:  
PN: WO0183725 SEQID: 19 unclaimed DNA 372214-08-9, 3: PN: WO0183725  
SEQID: 20 unclaimed DNA 372214-09-0, 4: PN: WO0183725 SEQID: 21  
unclaimed DNA 372214-10-3, 5: PN: WO0183725 SEQID: 22 unclaimed DNA  
372214-11-4, 6: PN: WO0183725 SEQID: 23 unclaimed DNA 372214-12-5, 7:  
PN: WO0183725 SEQID: 24 unclaimed DNA 372214-13-6, 8: PN: WO0183725  
SEQID: 25 unclaimed DNA 372214-14-7, 9: PN: WO0183725 SEQID: 26  
unclaimed DNA 372214-15-8  
RL: PRP (Properties)  
(unclaimed nucleotide sequence; human coagulation factor VII variants with improved activity)

IT 372200-66-3 372200-67-4 372200-68-5 372200-69-6 372200-70-9  
372200-71-0 372200-72-1 372200-73-2 372200-74-3 372200-75-4  
372200-76-5 372200-77-6 372200-78-7 372200-79-8 372200-80-1  
372200-81-2  
RL: PRP (Properties)  
(unclaimed sequence; human coagulation factor VII variants with improved activity)

IT 102786-52-7DP, Blood-coagulation factor VII  
(human clone .lambda.HVII2463 protein moiety), variants  
372134-92-4P 372134-93-5P 372210-12-3P  
372210-13-4P 372210-14-5P 372210-15-6P  
RL: BAC (Biological activity or effector, except adverse); BPN  
(Biosynthetic preparation); BSU (Biological study, unclassified); PRP  
(Properties); THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)  
(amino acid sequence; human coagulation factor VII  
variants with improved activity)

RN 102786-52-7 HCAPLUS  
CN Blood-coagulation factor VII (human clone .lambda.HVII2463 protein moiety)  
(9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372134-92-4 HCAPLUS  
CN Blood-coagulation factor VII [306-aspartic acid,309-serine] (human clone  
.lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372134-93-5 HCAPLUS  
CN Blood-coagulation factor VII [374-proline] (human clone .lambda.HVII2463)  
(9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-12-3 HCAPLUS  
CN Blood-coagulation factor VII [305-valine] (human clone .lambda.HVII2463)  
(9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-13-4 HCAPLUS  
CN Blood-coagulation factor VII [305-isoleucine] (human clone  
.lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-14-5 HCAPLUS  
CN Blood-coagulation factor VII [305-threonine] (human clone  
.lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 372210-15-6 HCAPLUS  
CN Blood-coagulation factor VII [305-valine,306-aspartic acid,309-serine]  
(human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> selec hit rn 112 1  
E1 THROUGH E7 ASSIGNED

→ sequences from 12①

=> fil reg

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STRUCTURE FILE UPDATES: 1 JUL 2003 HIGHEST RN 540721-20-8  
DICTIONARY FILE UPDATES: 1 JUL 2003 HIGHEST RN 540721-20-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when

conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s e1-7

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1 102786-52-7/BI
  (102786-52-7/RN)
1 372134-92-4/BI
  (372134-92-4/RN)
1 372134-93-5/BI
  (372134-93-5/RN)
1 372210-12-3/BI
  (372210-12-3/RN)
1 372210-13-4/BI
  (372210-13-4/RN)
1 372210-14-5/BI
  (372210-14-5/RN)
1 372210-15-6/BI
  (372210-15-6/RN)

```



sequences from 412①

L13 7 (102786-52-7/BI OR 372134-92-4/BI OR 372134-93-5/BI OR 372210-12-3/BI OR 372210-13-4/BI OR 372210-14-5/BI OR 372210-15-6/BI)

=> s l13 and l1

L14 7 L13 AND L1

=> d sqide3 l14 1-7

L14 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2003 ACS

RN 372210-15-6 REGISTRY

CN Blood-coagulation factor VII [305-valine,306-aspartic acid,309-serine]  
(human clone .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Gla-6	-	-	
uncommon	Gla-7	-	-	
uncommon	Gla-14	-	-	
uncommon	Gla-16	-	-	
uncommon	Gla-19	-	-	
uncommon	Gla-20	-	-	
uncommon	Gla-25	-	-	
uncommon	Gla-26	-	-	
uncommon	Gla-29	-	-	
uncommon	Gla-35	-	-	

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-

61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === === === === === === === === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Val-Asp-Thr-Gln-Ser-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L14 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2003 ACS

RN 372210-14-5 REGISTRY

CN Blood-coagulation factor VII [305-threonine] (human clone  
 .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Gla-6	-
uncommon	Gla-7	-

uncommon	Gla-14	-	-
uncommon	Gla-16	-	-
uncommon	Gla-19	-	-
uncommon	Gla-20	-	-
uncommon	Gla-25	-	-
uncommon	Gla-26	-	-
uncommon	Gla-29	-	-
uncommon	Gla-35	-	-

---

SEQ3      1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === === === === === === === === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Thr-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified  
 CI MAN  
 SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L14 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2003 ACS

RN 372210-13-4 REGISTRY

CN Blood-coagulation factor VII [305-isoleucine] (human clone  
 .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location			description
uncommon	Gla-6	-	-	
uncommon	Gla-7	-	-	
uncommon	Gla-14	-	-	
uncommon	Gla-16	-	-	
uncommon	Gla-19	-	-	
uncommon	Gla-20	-	-	
uncommon	Gla-25	-	-	
uncommon	Gla-26	-	-	
uncommon	Gla-29	-	-	
uncommon	Gla-35	-	-	

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === === === === === === === === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-

301 Asn-Val-Pro-Arg-Ile-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L14 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2003 ACS

RN 372210-12-3 REGISTRY

CN Blood-coagulation factor VII [305-valine] (human clone .lambda.HVII2463)  
 (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Gla-6	-
uncommon	Gla-7	-
uncommon	Gla-14	-
uncommon	Gla-16	-
uncommon	Gla-19	-
uncommon	Gla-20	-
uncommon	Gla-25	-
uncommon	Gla-26	-
uncommon	Gla-29	-
uncommon	Gla-35	-

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-

181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === === === === === === === === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Val-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L14 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2003 ACS

RN 372134-93-5 REGISTRY

CN Blood-coagulation factor VII [374-proline] (human clone .lambda.HVII2463)  
 (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Gla-6	-
uncommon	Gla-7	-
uncommon	Gla-14	-
uncommon	Gla-16	-
uncommon	Gla-19	-
uncommon	Gla-20	-
uncommon	Gla-25	-
uncommon	Gla-26	-
uncommon	Gla-29	-
uncommon	Gla-35	-

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-

11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-



21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
 71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
 === === === === === === === === ===  
 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Leu-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Pro-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L14 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2003 ACS

RN 372134-92-4 REGISTRY

CN Blood-coagulation factor VII [306-aspartic acid,309-serine] (human clone  
 .lambda.HVII2463) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 406

NTE

type	location	description
uncommon	Gla-6	-
uncommon	Gla-7	-
uncommon	Gla-14	-
uncommon	Gla-16	-
uncommon	Gla-19	-
uncommon	Gla-20	-
uncommon	Gla-25	-
uncommon	Gla-26	-
uncommon	Gla-29	-
uncommon	Gla-35	-

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-  
71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
=== === === === === === === === ===  
261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
=== === === === === === === === ===  
271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
=== === === === === === === === ===  
281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
=== === === === === === === === ===  
291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
301 Asn-Val-Pro-Arg-Leu-Asp-Thr-Gln-Ser-Cys-  
311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

MF Unspecified  
 CI MAN  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
                   1 REFERENCES IN FILE CA (1957 TO DATE)  
                   1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L14 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2003 ACS  
 RN 102786-52-7 REGISTRY  
 CN Blood-coagulation factor VII (human clone .lambda.HVII2463 protein moiety)  
     (9CI) (CA INDEX NAME)

## OTHER NAMES:

CN 1: PN: WO0183725 SEQID: 1 claimed protein  
 FS PROTEIN SEQUENCE  
 SQL 406  
 NTE modified (modifications unspecified)

type	location	description
bridge	Cys-17 - Cys-22	disulfide bridge
bridge	Cys-50 - Cys-61	disulfide bridge
bridge	Cys-55 - Cys-70	disulfide bridge
bridge	Cys-72 - Cys-81	disulfide bridge
bridge	Cys-91 - Cys-102	disulfide bridge
bridge	Cys-98 - Cys-112	disulfide bridge
bridge	Cys-114 - Cys-127	disulfide bridge
bridge	Cys-135 - Cys-262	disulfide bridge
bridge	Cys-159 - Cys-164	disulfide bridge
bridge	Cys-178 - Cys-194	disulfide bridge
bridge	Cys-310 - Cys-329	disulfide bridge
bridge	Cys-340 - Cys-368	disulfide bridge
uncommon	Gla-6 -	-
uncommon	Gla-7 -	-
uncommon	Gla-14 -	-
uncommon	Gla-16 -	-
uncommon	Gla-19 -	-
uncommon	Gla-20 -	-
uncommon	Gla-25 -	-
uncommon	Gla-26 -	-
uncommon	Gla-29 -	-
uncommon	Gla-35 -	-

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	WO2001083725
	claimed
	SEQID 1

SEQ3 1 Ala-Asn-Ala-Phe-Leu-Gla-Gla-Leu-Arg-Pro-  
 11 Gly-Ser-Leu-Gla-Arg-Gla-Cys-Lys-Gla-Gla-  
 21 Gln-Cys-Ser-Phe-Gla-Gla-Ala-Arg-Gla-Ile-  
 31 Phe-Lys-Asp-Ala-Gla-Arg-Thr-Lys-Leu-Phe-  
 41 Trp-Ile-Ser-Tyr-Ser-Asp-Gly-Asp-Gln-Cys-  
 51 Ala-Ser-Ser-Pro-Cys-Gln-Asn-Gly-Gly-Ser-  
 61 Cys-Lys-Asp-Gln-Leu-Gln-Ser-Tyr-Ile-Cys-

71 Phe-Cys-Leu-Pro-Ala-Phe-Glu-Gly-Arg-Asn-  
 81 Cys-Glu-Thr-His-Lys-Asp-Asp-Gln-Leu-Ile-  
 91 Cys-Val-Asn-Glu-Asn-Gly-Gly-Cys-Glu-Gln-  
 101 Tyr-Cys-Ser-Asp-His-Thr-Gly-Thr-Lys-Arg-  
 111 Ser-Cys-Arg-Cys-His-Glu-Gly-Tyr-Ser-Leu-  
 121 Leu-Ala-Asp-Gly-Val-Ser-Cys-Thr-Pro-Thr-  
 131 Val-Glu-Tyr-Pro-Cys-Gly-Lys-Ile-Pro-Ile-  
 141 Leu-Glu-Lys-Arg-Asn-Ala-Ser-Lys-Pro-Gln-  
 151 Gly-Arg-Ile-Val-Gly-Gly-Lys-Val-Cys-Pro-  
 161 Lys-Gly-Glu-Cys-Pro-Trp-Gln-Val-Leu-Leu-  
 171 Leu-Val-Asn-Gly-Ala-Gln-Leu-Cys-Gly-Gly-  
 181 Thr-Leu-Ile-Asn-Thr-Ile-Trp-Val-Val-Ser-  
 191 Ala-Ala-His-Cys-Phe-Asp-Lys-Ile-Lys-Asn-  
 201 Trp-Arg-Asn-Leu-Ile-Ala-Val-Leu-Gly-Glu-  
 211 His-Asp-Leu-Ser-Glu-His-Asp-Gly-Asp-Glu-  
 221 Gln-Ser-Arg-Arg-Val-Ala-Gln-Val-Ile-Ile-  
 231 Pro-Ser-Thr-Tyr-Val-Pro-Gly-Thr-Thr-Asn-  
 241 His-Asp-Ile-Ala-Leu-Leu-Arg-Leu-His-Gln-  
 251 Pro-Val-Val-Leu-Thr-Asp-His-Val-Val-Pro-  
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 261 Leu-Cys-Leu-Pro-Glu-Arg-Thr-Phe-Ser-Glu-  
 === === === === === === === === ===  
 271 Arg-Thr-Leu-Ala-Phe-Val-Arg-Phe-Ser-Leu-  
 === === === === === === === === ===  
 281 Val-Ser-Gly-Trp-Gly-Gln-Leu-Leu-Asp-Arg-  
 === === === === === === === === ===  
 291 Gly-Ala-Thr-Ala-Leu-Glu-Leu-Met-Val-Leu-  
 301 Asn-Val-Pro-Arg-Leu-Met-Thr-Gln-Asp-Cys-  
 311 Leu-Gln-Gln-Ser-Arg-Lys-Val-Gly-Asp-Ser-  
 321 Pro-Asn-Ile-Thr-Glu-Tyr-Met-Phe-Cys-Ala-  
 331 Gly-Tyr-Ser-Asp-Gly-Ser-Lys-Asp-Ser-Cys-  
 341 Lys-Gly-Asp-Ser-Gly-Gly-Pro-His-Ala-Thr-  
 351 His-Tyr-Arg-Gly-Thr-Trp-Tyr-Leu-Thr-Gly-  
 361 Ile-Val-Ser-Trp-Gly-Gln-Gly-Cys-Ala-Thr-  
 371 Val-Gly-His-Phe-Gly-Val-Tyr-Thr-Arg-Val-  
 381 Ser-Gln-Tyr-Ile-Glu-Trp-Leu-Gln-Lys-Leu-  
 391 Met-Arg-Ser-Glu-Pro-Arg-Pro-Gly-Val-Leu-  
 401 Leu-Arg-Ala-Pro-Phe-Pro

HITS AT: 251-290

**\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\***

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, DRUGPAT, DRUGUPDATES, TOXCENTER, USPATFULL

4 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

4 REFERENCES IN FILE CAPLUS (1957 TO DATE)